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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,165	12/20/2001	Cheol Joon Yoo		4604

7590 09/25/2003

Mr. John Castellano  
Harness, Dickey, Pierce  
12355 Sunrise Valley Drive , Suite 350  
Reston, VA 20191

EXAMINER

DAVIS, ROBERT B

ART UNIT

PAPER NUMBER

1722

DATE MAILED: 09/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/029,165

Applicant(s)

YOO, CHEOL JOON

Examiner

Robert B. Davis

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 0703. 6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4-8, 11-13 and 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese reference (JP07136599A: abstract, figures and partial machine translation of the description of the drawings).

The Japanese reference teaches a mold cleaning device comprising: upper and lower brushes (27) for cleaning upper and lower molds (23, 25 see figure 7 where both molds are cleaned simultaneously), suction holes (28) for removing debris removed by the brushes, spraying nozzles (4, 5) for coating the opposed molds with a release agent. In regards to claim 12, the preamble language about semiconductor manufacturing is intended usage. The Japanese reference has the structure required by the claims.

3. Claims 1, 3 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Sticht (5,053,173; figure 1 and column 7, lines 47-57).

Sticht teaches a mold cleaning unit having brushes, blowing and suction units, and spray nozzles to apply a parting agent to the mold after cleaning.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese reference (-599) taken together with Applicant's admitted prior art figures 1a, 1b and pages 1-3 of the specification.

The Japanese reference discloses all claimed features except for the use of a vibrator to vibrate the brush.

The admitted prior art teaches a brush assembly (234) having a vibrator with which the brush cleanses opposed molds.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the apparatus of the Japanese reference by using a vibrator to vibrate the brush as disclosed by the admitted prior art as such was a well known manner of translating a brush to remove debris from a mold.

6. Claims 3, 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese reference (-599) taken together with Sticht.

The Japanese reference discloses all claimed features except for the use of holes to blow compressed air against the mold surface.

Sticht discloses a mold-cleaning device having a blowing unit for directing a gas at the mold.

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It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the apparatus of the Japanese reference by using a blowing unit for directing a gas at the mold as disclosed by Sticht for the purpose of removing debris loosened by the brushes.

**Conclusion**

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The remaining references show various mold cleaning units.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert B. Davis whose telephone number is 703-308-2625. The examiner can normally be reached on Monday-Friday 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 703-308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Robert B. Davis  
Primary Examiner  
Art Unit 1722

9/22/02